REMARKS/ARGUMENTS

Applicant has carefully studied the Examiner's objections noted in the Advisory Action and has amended this application by canceling main Claim 16 previously on file and by filing a new main claim 18 which overcomes the 35 U.S.C. 112 second paragraph rejection and which patentably differentiates from the cited prior art.

New main claim 18 now recites that the pressure applied to the mixture in the mold and the quantity of water in the mixture are sufficiently high to prevent the plaster crystallization in the mixture under pressure in the mold.

This feature is supported in the specification at page 2, lines 25-26 and page 3, lines 1-2 where it is explained that if the mixture is subjected to a pressure that is above a threshold, plaster crystallization is prevented, provided that the mixture contains a sufficient quantity of water. This sentence in the specification clearly means that both the pressure applied to the mixture and the quantity of water in the mixture must have sufficiently high values when the aimed result is to prevent the plaster crystallization in the mold.

This feature is not indefinite because it is a fact that the plaster crystallization in the mold is prevented when the pressure applied to the mixture in the mold and the quantity of water in the mixture are sufficiently high.

In fact, both the pressure and the quantity of water have to be higher than threshold values which vary with the temperature. The threshold value for the quantity of water varies also with the pressure and with the specific characteristics of the plaster and of the filler.

This feature is new and unobvious with respect to the prior art. Neither Brouard nor Randel nor Revord disclose or suggest that the plaster crystallization can be prevented when the pressure and the quantity of water are both sufficiently high.

On the contrary, Brouard teaches that the plaster in the mixture must be crystallized under pressure in the mold. As noted by the Examiner, Brouard indicates that the plaster has to be hydrated to about 70%-90% inside the mold, which means that about 70%-90% of the plaster crystallization occurs under pressure in the mold. This crystallization under pressure has two consequences:

- the crystal size in the final building element is smaller because the pressure applied to the mixture in the mold opposes the crystal growth,

- the pressure created inside the mold by the plaster volumic expansion is very high at the beginning of unmolding (see Brouard, col. 6, lines 49-51 and col. 7, lines 22-24).

In fact, if the plaster is fully crystallized inside the mold, the pressure created inside the mold by the plaster expansion is too high and the building element cannot be unmolded.

The method of new main claim 18 eliminates these drawbacks and makes it possible to very easily unmold the building element, because the plaster crystallization inside the mold has been prevented, so that the pressure inside the mold has not increased and remains at a relatively small value when the building element is unmolded.

Revord teaches the application of a pressure to a mixture in a mold when the mixture contains 20% of water or less. Under these conditions, the plaster crystallization under pressure in the mold is not prevented, even when the pressure applied to the mixture in the mold is very high. Revord presents the same drawbacks as Brouard as concerns the unmolding of the building element, because of the volumic expansion of the plaster under pressure inside the mold.

Randel teaches that a special plaster can be mixed with 39%-42% of water for having a pouring consistency and that a mixture of special plaster and water containing 35% of water and molded at 4000 psi has a water absorption of only 3.2% (when set and dried) instead of 5.5% when molded at 5 psi. This result has no relationship with the unmolding problems in Brouard.

The present invention makes it possible to solve these problems by preventing the plaster crystallization under pressure in the mixture contained in the mold. Preventing the plaster crystallization means in fact preventing the growth of the crystals, this growth being the cause of the volumic expansion of the plaster crystallization.

As mentioned here above, the plaster crystallization in the mold is prevented when the amount of pressure applied to the mixture in the mold and the quantity of water in the mixture have sufficiently high values.

A combination of particular values of pressure and of water quantity is mentioned by Randel as permitting to reduce the water absorption of the product when set and dried. This

information cannot be used by one skilled in the art for preventing the plaster crystallization inside a mold.

Even if, as mentioned by the Examiner, the particular values of pressure and water quantity given in Randel permitted to prevent the plaster crystallization in the mold during application of the pressure, this result has not been seen by Randel because the plaster crystallization, i.e. the growth of the crystals, is re-initiated immediately when the pressure is no longer applied to the mixture. Randel or anyone skilled in the art has no means which would permit to see or to understand that the plaster crystallization has been prevented, or not, during application of the pressure to the mixture in the mold.

Because the plaster crystallization is not visible, it has to be determined indirectly, either by detecting a pressure increase in the mixture inside the mold or by detecting a temperature increase in the mixture inside the mold (the plaster crystallization is an exothermic reaction).

Because Randel has not provided the mold used for compressing the mixture at 4000 psi with a pressure sensor or a temperature sensor, he was unable to know whether the plaster crystallization was prevented in the mold or not. Moreover, Randel had no reason to check the plaster crystallization in the mixture under pressure in the mold.

It is, therefore, clear that the method recited in new claim 18 is not suggested to one skilled in the art by Brouard, Randel and Revord taken in view of one another and is therefore patentable.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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